Chapter 7
Utilizing Suicide Risk Screening as a Prevention Technique in Pediatric Medical Settings

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Pediatricians and other medical providers are de facto mental health providers on the front lines of the public health crisis of youth suicide and are uniquely positioned to recognize warning signs and help young people develop effective coping strategies for managing emotional distress (Kessler & Stafford, 2008). Universal screening for suicide risk, which involves screening all patients regardless of presenting problem, in all medical settings, including primary care, is supported and encouraged by many organizations, including the American Academy of Pediatrics (AAP), The Joint Commission (TJC), and the National Action Alliance for Suicide Prevention (NAASP) (Shain & Committee on Adolescence, 2016; TJC, 2016; NAASP, 2012). Implementing suicide risk screening and assessment with evidence-based tools can enhance feasibility of screening for suicide risk without overburdening busy systems of care (Horowitz et al., 2010, 2020). Moreover, screening has been identified as an effective suicide prevention tool (NAASP, 2012). Through education and training, pediatric providers can be pivotal partners in detecting suicide risk and connecting their patients to mental health treatments. This chapter will highlight how utilizing evidence-based screening tools and clinical pathways to manage patients that screen positive can be feasible and potentially lifesaving.

Medical Settings as Venues for Suicide Risk Screening

Medical settings are uniquely positioned to screen for suicide risk as they are a major point of connection between trusted adults and youth. From a public health perspective, the majority of youth in the USA have annual contact with physicians

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in emergency departments (EDs), hospitals, and outpatient primary care settings. Youth are also typically accompanied to healthcare settings by parents or caregivers which is crucial for effective assessment, intervention, and safety planning. Of note, death registry studies show that 80% of adolescents who die by suicide visited a healthcare setting in the months or even weeks prior to their death (Ahmedani et al., 2014; Rhodes et al., 2013), whereas only 20% of suicide decedents had contact with a mental health professional in the month prior to their death by suicide (Luoma et al., 2002). For some, nonbehavioral health venues may be the only healthcare contact where an individual's suicide risk can be identified.

In an effort to reduce youth suicide rates, which have increased steadily over the past decade (see Ruch & Bridge, Chap. 1, this volume), TJC has highlighted medical settings as critical venues for suicide risk detection by issuing Sentinel Event Alert 56 (SEA 56), urging medical settings to screen all medical patients for suicide risk using brief, evidence-based screening tools (TJC, 2016). TJC also updated National Patient Safety Goal 15 (NPSG 15) in 2019 to enhance patient safety and healthcare delivery for both behavioral health patients and medical patients at risk for suicide (TJC, 2019). As a result of SEA 56 and NPSG 15, many medical settings have begun implementing suicide risk screening, further necessitating validated suicide risk screening tools for use among medical patients. Numerous institutions have already reported on their considerable progress implementing screening among pediatric medical patients (Roaten et al., 2021; Lois et al., 2020). The experiences of these institutions have demonstrated that obtaining stakeholder endorsement, establishing a dedicated interdisciplinary work group, and appropriately managing positive screens are essential to a screening program's sustainability (Roaten et al., 2021; Snyder et al., 2020). There are also gaps in understanding and executing effective screening programs; please see TJC website for guidance (https://www.jointcommission.org/resources/patient-safety-topics/suicide-prevention/). Medical patients typically present with somatic chief complaints and rarely disclose suicidal thoughts unless directly asked (Pan et al., 2009), requiring systematic suicide risk screening of medical patients to detect suicide risk that would otherwise go undetected. It is important to use tools that are evidence-based and, when possible, created for the targeted age group and validated in the settings in which they are going to be used. A review by Thom et al. (2020) highlighted several well-validated suicide risk screening tools for use in medical settings, including the Ask Suicide-Screening Questions (ASQ; Horowitz et al., 2012) and the Patient Safety Screener (PSS; Boudreaux et al., 2015), that were designed for and validated among medical patients (Thom et al., 2020). Additionally, new tools continue to be developed, such as the Computerized Adaptive Screen for Suicidal Youth (CASSY; King et al., 2021), which take advantage of new technologies to enhance screening processes in the ED.

Barriers to Address

Prior to implementing a suicide risk screening program, several barriers may need to be addressed. First, there is a common myth that asking someone questions about suicide can "put ideas in their head" and cause someone to have thoughts of suicide. This myth may lead providers and families to have concerns about or avoid suicide risk screening. However, this potential iatrogenic risk of screening has been refuted in multiple studies (Gould et al., 2005; DeCou & Schumann, 2018). In fact, one of the most effective ways to keep a young person from killing themselves is by asking them directly, "Are you thinking of killing yourself?", and then listening empathetically, and responding supportively.

Suicide Risk Screening Clinical Pathways

Often, healthcare providers recognize the need for suicide risk identification but feel ill-equipped to build screening into routine practice. To provide physicians with step-by-step instructions on how to manage patients at risk for suicide and to address some of the barriers surrounding suicide risk screening, the American Academy of Child and Adolescent Psychiatry (AACAP) sponsored the creation of youth suicide risk screening clinical pathways (Brahmbhatt et al., 2019). These screening pathways were designed to allow each medical facility the flexibility to adapt screening procedures based on available staff and resources. The pathways use a three-tiered system that begins with a nurse/medical assistant administering the ASQ as a brief screen. Next, if a patient screens positive for suicide risk, a mental health clinician, nurse practitioner, physician assistant, or physician conducts a Brief Suicide Safety Assessment (BSSA) using the Columbia-Suicide Severity Rating Scale (C-SSRS; Posner et al., 2011) or the ASQ Brief Suicide Safety Assessment (ASQ BSSA; NIMH, 2017). The second step of the pathway, administering a BSSA, is critical as it aides the clinician in quickly determining next steps for a patient who screens positive for suicide risk. Finally, the third step of the clinical pathway utilizes the risk assessment results to determine whether the patient proceeds to a full mental health evaluation, a mental health referral, or safety planning and resources. The pathways were designed to be flexible and adaptable to each venue's institutional milieu and can be adapted in a way that was most functional for the institution implementing the tools.

Suicide risk screening of medical patients may be especially challenging when in-person visits are restricted such as during the COVID-19 pandemic. Although data are not yet available regarding how the recent pandemic affected the overall youth suicide rate, there remains an urgent need to continue screening for suicide risk. To address this need, COVID-19 suicide risk screening clinical pathways were developed to guide clinicians through screening for suicide risk via telehealth/phone to effectively manage patients who screen positive (Pao et al., 2020). Typically,

individuals with acute suicidal thoughts require an urgent psychiatric evaluation in an ED. The pathway was revised to help patients at acute suicide risk and their parents/guardians find alternatives to going to the ED in order to avoid exposure to COVID-19 and also spare the ED from over-crowding during the pandemic. In addition to the over-crowding problems created for the healthcare system, unnecessary ED visit can be traumatizing and costly to families (Lerwick, 2016), and therefore is not an effective intervention. A critical part of this pathway is for the healthcare practitioner to provide lethal means safety counseling (see Monahan & Stanley, Chap. 9, this volume) to the patient and family members or friends to ensure safe storage or removal of potentially dangerous items (e.g., pills, firearms, belts, knives). Separate adult and youth versions of this pathway were created and are available as part of the ASQ Toolkit (www.nih.nimh/ASQ).

Feasibility of Screening

Screening for suicide risk has been shown to be feasible in both large and small healthcare systems (Roaten et al., 2021; Snyder et al., 2020; Tipton et al., 2019). In order to successfully implement a screening program, it is important to enact quality improvement processes, such as a Plan-Do-Study-Act quality improvement (QI) framework (Deming, 1993). The iterative QI framework aims to raise the standard of care for all patients and begins with formalizing a plan for what the elevated standard of care should be, followed by training and education to achieve this standard. A pilot phase in which individuals can provide suggestions for improvement allows for continuous improvements to be made as research advances. Using a QI approach, suicide risk screening was successfully implemented at a suburban pediatric primary care practice in Richmond, Virginia (Tipton et al., 2019). Following the iterative Plan-Do-Study-Act QI approach, medical staff were trained to administer screening and to manage patients who screened positive for suicide risk. During this process, unanticipated problems were identified and addressed. For example, upon receiving numerous questions from parents, an informational flyer for parents was circulated at the clinic to announce the new addition of suicide risk screening to standard practice. By using a QI methodology, suicide risk screening was successfully implemented with both nurses and physicians who indicated that screening did not disrupt clinic workflow and that they felt comfortable screening and managing patients for suicide risk (Tipton et al., 2019). The ASQ tool is available publicly in the ASQ Toolkit in many different languages (www.nih.nimh/ASQ). Resources for other commonly used screeners, like the C-SSRS, are available (www.cssrs.columbia.edu).

Screening Underserved Populations

Black, Indigenous, and people of color (BIPOC) youth have been historically excluded in suicide research. When universally screening for suicide risk, it is important to use screening tools that are valid for use among groups at higher risk. Similarly, screening tools need to be culturally and psychometrically sensitive. The ASQ has been translated into 18 languages, but to maintain its psychometric properties, there was a need to go beyond verbatim translation. For example, the ASQ tool was considered for use in a medical facility that served members of the Navajo Nation. There were concerns about how screening would be perceived, as the ASQ has items that ask directly about suicide using words like "death," which is a taboo word in this culture. Changing the language of validated tools is typically advised against; however, measures are often validated in contexts that do not account for cultural differences, and administering to a new group without accounting for these factors may be equally problematic. With input from members of the Navajo Nation, researchers created a Diné version of the ASQ specifically for members of the Navajo Nation which replaced the word "death" with "not alive." Whenever changing the language of a tool, it is important to retest it. A study is underway to validate this version of the tool to ensure that it still accurately identifies suicide risk. Linguistic differences should also be considered when translating suicide risk screening tools.

Conclusion

Medical settings represent one of the few opportunities for young people to disclose mental health issues and be connected to resources. Through implementing QI methodology and using three-tiered suicide risk screening clinical pathways, evidence-based suicide risk screening programs are achievable and can allow healthcare systems to feasibly integrate screening into practice. To ensure that universal suicide risk screening programs are truly "universal," we must question whether our tools and pathways work for all intended populations. Specifically, providers should evaluate whether screening instruments and assessment approaches are effective for understudied populations who may also be at high risk for suicide. Providers should also consider how they gather and act on feedback from communities as well as individuals with lived experience (see Rowan et al., Chap. 18, this volume). Future research, clinical practices, and policies must focus on addressing the needs of high-risk populations to ensure screening tools accurately identify risk among all individuals and are culturally sensitive.

References

Ahmedani, B. K., Simon, G. E., Stewart, C., Beck, A., Waitzfelder, B. E., Rossom, R., Lynch, F., Owen-Smith, A., Hunkeler, E. M., Whiteside, U., Operskalski, B. H., Coffey, M. J., & Solberg, L. I. (2014). Health care contacts in the year before suicide death. *Journal of General Internal Medicine, 29*(6), 870–877. https://doi.org/10.1007/s11606-014-2767-3

Boudreaux, E. D., Jaques, M. L., Brady, K. M., Matson, A., & Allen, M. H. (2015). The patient safety screener: Validation of a brief suicide risk screener for emergency department settings. *Archives of Suicide Research, 19*(2), 151–160. https://doi.org/10.1080/13811118.2015.1034604

Brahmbhatt, K., Kurtz, B. P., Afzal, K. I., Giles, L. L., Kowal, E. D., Johnson, K. P., Lanzillo, E., Pao, M., Plioplys, S., Horowitz, L. M., & PaCC Workgroup. (2019). Suicide risk screening in pediatric hospitals: Clinical pathways to address a global health crisis. *Psychosomatics, 60*(1), 1–9. https://doi.org/10.1016/j.psym.2018.09.003

DeCou, C. R., & Schumann, M. E. (2018). On the iatrogenic risk of assessing suicidality: A meta-analysis. *Suicide & Life-Threatening Behavior, 48*(5), 531–543. https://doi.org/10.1111/sltb.12368

Deming, W. E. (1993). *The new economics for industry, government, education*. Massachusetts Institute of Technology, Center for Advanced Engineering Study.

Gould, M. S., Marrocco, F. A., Kleinman, M., Thomas, J. G., Mostkoff, K., Cote, J., & Davies, M. (2005). Evaluating iatrogenic risk of youth suicide screening programs: A randomized controlled trial. *JAMA, 293*(13), 1635–1643. https://doi.org/10.1001/jama.293.13.1635

Horowitz, L., Ballard, E., Teach, S. J., Bosk, A., Rosenstein, D. L., Joshi, P., Dalton, M. E., & Pao, M. (2010). Feasibility of screening patients with nonpsychiatric complaints for suicide risk in a pediatric emergency department: A good time to talk? *Pediatric Emergency Care, 26*(11), 787–792. https://doi.org/10.1097/PEC.0b013e3181fa8568

Horowitz, L. M., Bridge, J. A., Teach, S. J., Ballard, E., Klima, J., Rosenstein, D. L., Wharff, E. A., Ginnis, K., Cannon, E., Joshi, P., & Pao, M. (2012). Ask Suicide-Screening Questions (ASQ): A brief instrument for the pediatric emergency department. *Archives of Pediatrics & Adolescent Medicine, 166*(12), 1170–1176. https://doi.org/10.1001/archpediatrics.2012.1276

Horowitz, L. M., Wharff, E. A., Mournet, A. M., Ross, A. M., McBee-Strayer, S., He, J. P., Lanzillo, E.vC., White, E., Bergdoll, E., Powell, D. S., Solages, M., Merikangas, K. R., Pao, M., & Bridge, J. A. (2020). Validation and feasibility of the ASQ among pediatric medical and surgical inpatients. *Hospital Pediatrics, 10*(9), 750–757. https://doi.org/10.1542/hpeds.2020-0087

Kessler, R., & Stafford, D. (2008). Primary care is the De Facto mental health system. In R. Kessler & D. Stafford (Eds.), *Collaborative medicine case studies*. Springer. https://doi.org/10.1007/978-0-387-76894-6_2

King, C. A., Brent, D., Grupp-Phelan, J., Casper, T. C., Dean, J. M., Chernick, L. S., Fein, J. A., Mahabee-Gittens, E. M., Patel, S. J., Mistry, R. D., Duffy, S., Melzer-Lange, M., Rogers, A., Cohen, D. M., Keller, A., Shenoi, R., Hickey, R. W., Rea, M., Cwik, M., … Pediatric Emergency Care Applied Research Network. (2021). Prospective development and validation of the computerized adaptive screen for suicidal youth. *JAMA Psychiatry, 78*(5), 540–549. https://doi.org/10.1001/jamapsychiatry.2020.4576

Lerwick, J. L. (2016). Minimizing pediatric healthcare-induced anxiety and trauma. *World Journal of Clinical Pediatrics, 5*(2), 143–150. https://doi.org/10.5409/wjcp.v5.i2.143

Lois, B. H., Urban, T. H., Wong, C., Collins, E., Brodzinsky, L., Harris, M. A., Adkisson, H., Armstrong, M., Pontieri, J., Delgado, D., Levine, J., & Liaw, K. R. (2020). Integrating suicide risk screening into pediatric ambulatory subspecialty care. *Pediatric Quality & Safety, 5*(3), e310. https://doi.org/10.1097/pq9.0000000000000310

Luoma, J. B., Martin, C. E., & Pearson, J. L. (2002). Contact with mental health and primary care providers before suicide: A review of the evidence. *The American Journal of Psychiatry, 159*(6), 909–916. https://doi.org/10.1176/appi.ajp.159.6.909

National Action Alliance for Suicide Prevention. (2012*). 2012 national strategy for suicide prevention: Goals and objectives for action: A report of the U.S. Surgeon General and of the National Action Alliance for suicide prevention*. US Department of Health & Human Services.

National Institute of Mental Health. (2017). *ASQ suicide risk screening toolkit. Screening youth for suicide risk in medical settings*. Available at: www.nimh.nih.gov/ASQ

Pan, Y. J., Lee, M. B., Chiang, H. C., & Liao, S. C. (2009). The recognition of diagnosable psychiatric disorders in suicide cases' last medical contacts. *General Hospital Psychiatry, 31*(2), 181–184. https://doi.org/10.1016/j.genhosppsych.2008.12.010

Pao, M., Mournet, A. M., & Horowitz, L. M. (2020). Implementation challenges of universal suicide risk screening in adult patients in general medical and surgical settings. *Psychiatric Times, 37*(7), 25–27.

Posner, K., Brown, G. K., Stanley, B., Brent, D. A., Yershova, K. V., Oquendo, M. A., Currier, G. W., Melvin, G. A., Greenhill, L., Shen, S., & Mann, J. J. (2011). The Columbia-Suicide Severity Rating Scale: Initial validity and internal consistency findings from three multisite studies with adolescents and adults. *The American Journal of Psychiatry, 168*(12), 1266–1277. https://doi.org/10.1176/appi.ajp.2011.10111704

Rhodes, A. E., Khan, S., Boyle, M. H., Tonmyr, L., Wekerle, C., Goodman, D., Bethell, J., Leslie, B., Lu, H., & Manion, I. (2013). Sex differences in suicides among children and youth: The potential impact of help-seeking behaviour. *Canadian Journal of Psychiatry, 58*(5), 274–282. https://doi.org/10.1177/070674371305800504

Roaten, K., Horowitz, L. M., Bridge, J. A., Goans, C., McKintosh, C., Genzel, R., Johnson, C., & North, C. S. (2021). Universal pediatric suicide risk screening in a health care system: 90,000 patient encounters. *Journal of the Academy of Consultation-Liaison Psychiatry, 62*(4), 421–429. https://doi.org/10.1016/j.jaclp.2020.12.002

Shain, B., & Committee on Adolescence (2016). Suicide and suicide attempts in adolescents. *Pediatrics*, *138*(1), e20161420. https://doi.org/10.1542/peds.2016-1420

Snyder, D. J., Jordan, B. A., Aizvera, J., Innis, M., Mayberry, H., Raju, M., Lawrence, D., Dufek, A., Pao, M., & Horowitz, L. M. (2020). From pilot to practice: Implementation of a suicide risk screening program in hospitalized medical patients. *Joint Commission Journal on Quality and Patient Safety, 46*(7), 417–426. https://doi.org/10.1016/j.jcjq.2020.04.011

The Joint Commission. (2016). Detecting and treating suicide ideation in all settings. *Sentinel Event Alert Issue, 56*(56), 1–7.

The Joint Commission. (2019). *National Patient Safety Goal 15.01.01 R3 Report*. www.jointcommission.org/-/media/tjc/documents/standards/r3-reports/r3_18_suicide_prevention_hap_bhc_cah_11_4_19_final1.pdf. Accessed 17 Feb 2021.

Thom, R., Hogan, C., & Hazen, E. (2020). Suicide risk screening in the hospital setting: A review of brief validated tools. *Psychosomatics, 61*(1), 1–7. https://doi.org/10.1016/j.psym.2019.08.009

Tipton, M. V., Abernathy, T., Lanzillo, E. C., Powell, D., Snyder, D., Bridge, J., Schoenbaum, M., Pao, M., & Horowitz, L. M. (2019). 1.67 Implementing suicide risk screening in pediatric primary care: From research to practice. *Journal of the American Academy of Child & Adolescent Psychiatry, 58*(10).